BRUHAT BANGALORE MAHANAGARA PALIKE
NAME OF WORK :- Improvements to Roads And Drains in various Cross Roads of Devinagara,Lottegolahalli and surrounding area in ward no.12-Kodigehalli
EMB :1st And Final Bill
Job No :012-23-000007
PRE MEASUREMENTS

BRUHAT BENGALURU MAHANAGARA PALIKE

Running Account Bill No:1st And Final Bill

Name of work: :Improvements to Roads And Drains in various Cross Roads of Devinagara,Lottegolahalli and surrounding area in ward no.12-Kodigehalli

Job No : 012-23-000007

Work Order No : BBMP/EE/BTP/ WO/188/2022-23

Name Of Agency :Sri Abbu Sambasiva Reddy

Aggrement No :

EMB Pre Measurements Recorded On : 28/03/23 to 30/03/23

I.No	Description of work	Mesurement				Unit	Qty	Remarks
		No.	L	B	D			
2	Earth work Excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)							
	For New Drain infront of Indoor Stadium							
	Chainage 0-16.45	1	16.45	1.2	1.0	Cum	19.74	
	Chainage 16.45-21.97 Culvert	1	5.52	1.4	1.0	Cum	7.73	
	Chainage 21.97-36.97	1	15	1.2	1.0	Cum	18.00	
	Chainage 36.97-55.97	1	15	1.2	1.0	Cum	18.00	
	Chaiange 55.97-55.47	1	3.5	1.2	1.0	Cum	4.20	
	For New Drain Indoor Stadium Main Road side							
	Chainage 0-15.0	1	15	1.2	1.0	Cum	18.00	
	Chainage 15.0-30.0	1	15	1.2	1.0	Cum	18.00	
	Chainage 30.0-45.0	1	15	1.2	1.0	Cum	18.00	
	Chainage 45.0- 54.0	1	9	1.2	1.0	Cum	10.80	
	Desilting for Drains Badrappa Layout							
	LHS							
	Chainage 0-15.0	1	15	0.6	0.5	Cum	4.50	
	Chainage 15.0-30.0	1	15	0.6	0.5	Cum	4.50	
	Chainage 30.0-31.2	1	1.2	0.6	0.5	Cum	0.36	
	Chainage 31.2- 33.6	1	2.4	0.6	0.5	Cum	0.72	
	Chainage 33.6-36.6	1	3	0.6	0.5	Cum	0.90	
	Chainage 36.6-51.6	1	15	0.6	0.5	Cum	4.50	
	Chainage 51.6-66.6	1	15	0.6	0.5	Cum	4.50	
	Chainage 66.6-75.2	1	8.6	0.6	0.5	Cum	2.58	
	RHS							
	Chainage 0-15.0	1	15	0.6	0.5	Cum	4.50	

136.97

	Chainage 15.0-30.0	1	15	0.6	0.5	Cum	4.50
	Chainage 30.0-45.0	1	15	0.6	0.5	Cum	4.50
	Chainage 45.0- 60.0	1	15	0.6	0.5	Cum	4.50
	Chainage 60.0-75.0	1	15	0.6	0.5	Cum	4.50
	Covering Slab Drain Lhs(Badrappa Layout (Ram Provision Road)						
	Chainage 0-15.0	1	15	0.6	0.6	Cum	5.40
	Chainage 15.0-30.0	1	15	0.6	0.6	Cum	5.40
	Chainage 30.0-45.0	1	15	0.6	0.6	Cum	5.40
	Chainage 45.0- 60.0	1	15	0.6	0.6	Cum	5.40
	Covering Slab Drain Rhs(Badrappa Layout (Ram Provision Road)						
	Chainage 0-15.0	1	15	0.6	0.6	Cum	
	Chainage 15.0-30.0	1	15	0.6	0.6	Cum	5.40
	Chainage 30.0-45.0	1	15	0.6	0.6	Cum	5.40
	Chainage 45.0- 60.0	1	15	0.6	0.6	Cum	5.40
	Chainage 60.0-72.5	1	12.5	0.6	0.6	Cum	4.50
	Opposite Sahakarnagar Indoor Stadium Road						
	Chainage 0-15.0	1	15	0.6	0.6	Cum	5.40
	Chainage 15.0-30.0	1	15	0.6	0.6	Cum	5.40
	Chainage 30.0-45.0	1	15	0.6	0.6	Cum	5.40
	Chainage 45.0- 60.0	1	15	0.6	0.6	Cum	5.40
	Chainage 60.0-75.0	1	15	0.6	0.6	Cum	5.40
	Chainage 75.0-90.0	1	15	0.6	0.6	Cum	5.40
	Chainage 90.0-105.0	1	15	0.6	0.6	Cum	5.40
	Chainage 105.0-120.0	1	15	0.6	0.6	Cum	5.40
	Chainage 120.0-135.0	1	15	0.6	0.6	Cum	5.40
	Chainage 135.0-147.0	1	12	0.6	0.6	Cum	4.32
	Total Qty					**Cum**	**278.15**

14.4.18

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Contractor | Assistant Engineer | BBMP | Asst. Exe. Engineer BBMP Ward no 12

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

	Continued EMB Pre Measurements Recorded On : 07/04/23 to 11/04/23
4	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.Mix 1:3:6 (M10) Using 40 mm nominal size graded crushed coarse aggregates(PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2))

	For New Drain infront of Indoor Stadium Raft							
	Chainage 0-16.45	1	16.45	0.9	0.15		2.22	
	Chainage 16.45-21.97 Culvert	1	5.52	0.9	0.15		0.75	
	Chainage 21.97-36.97	1	15	0.9	0.15		2.03	
	Chainage 36.97-55.97	1	15	0.9	0.15		2.03	
	Chaiange 55.97-55.47	1	3.5	0.9	0.15		0.47	
	For New Drain Indoor Stadium Main Road side Raft							
	Chainage 0-15.0	1	15	0.9	0.15		2.03	
	Chainage 15.0-30.0	1	15	0.9	0.15		2.03	
	Chainage 30.0-45.0	1	15	0.9	0.15		2.03	
	Chainage 45.0- 54.0	1	9	0.9	0.15		1.22	
	For New Drain infront of Indoor Stadium							
	Wall Concrete							
	Chainage 0-16.45	2	16.45	0.15	0.7		3.45	
	Chainage 16.45-21.97 Culvert	2	5.52	0.3	0.7		2.31	
	Chainage 21.97-36.97	2	15	0.15	0.7		3.15	
	Chainage 36.97-55.97	2	15	0.15	0.7		3.15	
	Chaiange 55.97-55.47	2	3.5	0.15	0.7		0.73	
	For New Drain Indoor Stadium Main Road side Wall							
	Chainage 0-15.0	1	15	0.15	0.7		1.57	
	Chainage 15.0-30.0	1	15	0.15	0.7		1.57	
	Chainage 30.0-45.0	1	15	0.15	0.7		1.57	
	Chainage 45.0- 54.0	1	9	0.15	0.7		0.94	
	Total						**33.22**	

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Contractor

Assistant Engineer
BBMP Ward no 12

Asst. Exe. Engineer, BBMP
Ward no 12

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

	Continued EMB Pre Measurements Recorded On : 31/03/23 to 04/04/23							
5	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)							
	For New Drain infront of Indoor Stadium	No		Length	WT/KG		Total	
	Main Bars 10mm dia	2	687	2.4	0.617	Kg	2034.62	

Distribution Bars 8mm dia	1	9	104	0.395	Kg	369.72	
Culverts							
Main Bars 10mm dia	2	73	2.4	0.617	Kg	216.20	
Distribution Bars 8mm dia	1	12	5.5	0.395	Kg	26.07	
Total						2646.61	
Total					**Tonne**	2.65	

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Contractor

Assistant Engineer
BBMP Ward no 12

Asst. Exe. Engineer BBMP
Ward no 12

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Continued EMB Pre Measurements Recorded On : 29/03/23 to 01/04/23							
Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness,well compacted using plate vibrators, including all lead & lifts, cost ofall materials of quality, labour, Usage charges of machineries, curing,and all the other appurtenances required to complete the work as pertechnical specifications. (The cost of steel reinforcement & formwork shall be paid separately)(PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)							
For New Drain infront of Indoor Stadium							
Chainage 0-16.45	1	16.45	1.2	0.15		2.96	
Chainage 16.45-21.97 Culvert	1	5.52	1.4	0.15		1.15	
Chainage 21.97-36.97	1	15	1.2	0.15		2.7	
Chainage 36.97-55.97	1	15	1.2	0.15		2.7	
Chaiange 55.97-55.47	1	3.5	1.2	0.15		0.63	
For New Drain Indoor Stadium Main Road side							
Chainage 0-15.0	1	15	1.2	0.15		2.7	
Chainage 15.0-30.0	1	15	1.2	0.15		2.7	
Chainage 30.0-45.0	1	15	1.2	0.15		2.7	
Chainage 45.0- 54.0	1	9	1.2	0.15		1.62	
Ramp Concrete Indoor Stadium							
	1	(5.58+6.6 +7.4)/3	(3.1+2.72+3.1)/3	0.23		4.46	
Coping Concrete For Drains							
for Drains Badrappa Layout							

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

24.32

LHS							
Chainage 0-15.0	1	15	0.15	0.075		0.17	
Chainage 15.0-30.0	1	15	0.15	0.075		0.17	
Chainage 30.0-31.2	1	1.2	0.15	0.075		0.01	
Chainage 31.2- 33.6	1	2.4	0.15	0.075		0.03	
Chainage 33.6-36.6	1	3	0.15	0.075		0.03	
Chainage 36.6-51.6	1	15	0.15	0.075		0.17	
Chainage 51.6-66.6	1	15	0.15	0.075		0.17	
Chainage 66.6-75.2	1	8.6	0.15	0.075		0.10	
RHS							
Chainage 0-15.0	1	15	0.15	0.075		0.17	
Chainage 15.0-30.0	1	15	0.15	0.075		0.17	
Chainage 30.0-45.0	1	15	0.15	0.075		0.17	
Chainage 45.0- 60.0	1	15	0.15	0.075		0.17	
Chainage 60.0-75.0	1	15	0.15	0.075		0.17	
Covering Slab Drain Lhs(Badrappa Layout (Ram Provision Road)							
Chainage 0-15.0	1	15	0.15	0.075		0.17	
Chainage 15.0-30.0	1	15	0.15	0.075		0.17	
Chainage 30.0-45.0	1	15	0.15	0.075		0.17	
Chainage 45.0- 60.0	1	15	0.15	0.075		0.17	
Covering Slab Drain Rhs(Badrappa Layout (Ram Provision Road)							
Chainage 0-15.0	1	15	0.15	0.075		0.17	
Chainage 15.0-30.0	1	15	0.15	0.075		0.17	
Chainage 30.0-45.0	1	15	0.15	0.075		0.17	
Chainage 45.0- 60.0	1	15	0.15	0.075		0.17	
Chainage 60.0-72.5	1	12.5	0.15	0.075		0.14	3.18
Total Qty						**27.50**	

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Contractor

Assistant Engineer
BBMP Ward no 12

Assistant Executive Engineer
Kodigehalli Sub Division BBMP
BBMP, Bangalore

Asst. Exe. Engineer BBMP
Ward no 12

	Continued EMB Pre Measurements Recorded On : 17/04/23 to 19/04/23							
11	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work.(PWD SR 21-22 Vol I Pg no. 8 Item No. 1.12)							
	For New Drain infront of Indoor Stadium							

Chainage 0-8.0(RHS and LHS)	1	8	(9.75+9.75)/2	0.2		15.6	
Chainage 8.0-23.0 (RHS and LHS)	1	15	(9.75+8.8)/2	0.2		26.4	
Chainage 23.0-38.0 (RHS and LHS)	1	15	(8.8+9.1)/2	0.2		27.3	
Chainage 38.0- 53.0 (RHS and LHS)	1	15	(9.1+9.1)/3	0.2		27.3	
Chainage 53.0-68.0 (RHS and LHS)	1	15	(9.1+8.2)/2	0.2		24.6	
Chainage 68.0 -82.5 (RHS and LHS)	1	14.5	(8.2+9.92)/2	0.2		28.77	
Chainage 82.5-90.0 (RHS and LHS)	1	7.5	(9.92+10.12)/2	0.2		15.18	
Chainage 90.0-105.0 (RHS and LHS)	1	15	(10.12+7.72)/2	0.2		23.16	
Chainage 105.0-120.0 (RHS and LHS)	1	15	(7.72+9.87)/2	0.2		29.61	
Chainage 120.0-128.0 (RHS and LHS)	1	8	(9.8+10.72)/2	0.2		17.15	
Earth work for wmm Laying In	7	8.5	2.5	0.2		29.75	
Badrappa Layout road							
Chainage 0-15.0	1	15	(4.1+4.75)/2	0.2		13.28	
Chainage 15.0-30.0	1	15	(4.75+4.65)/2	0.2		14.7	
Chainage 30.0-45.0	1	15	(4.65+3.3)/2	0.2		10.2	
Chainage 45.0- 60.0	1	15	(3.3+4.3)/2	0.2		14.4	
Chainage 60.0-75.2.0	1	15.2	(4.3+5.0)/2	0.2		15.81	
Covering Slab Drain (Badrappa Layout (Ram Provision Road)							
Chainage 0-15.0	1	15	(4.5+4.75)/2	0.2		13.88	
Chainage 15.0-30.0	1	15	(4.75+5.1)/2	0.2		14.7	
Chainage 30.0-45.0	1	15	(5.1+5.25)/2	0.2		10.2	
Chainage 45.0- 60.0	1	15	(5.25+4.9)/2	0.2		14.4	
Chainage 60.0-72.5	1	12.5	(4.9+5.15)/2	0.2		13	
Total Qty						**399.38**	

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Contractor

Assistant Engineer
BBMP Ward no 12

Asst. Exe.Engineer BBMP
Ward no 12

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Continued EMB Pre Measurements Recorded On : 18/4/23 to 26/4/23

12	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density MORTH Specification No. 406 (PWD SR 21-22 Vol III Pg no. 24 Item No. 4.27 (A))							
	Indoor Stadium							
	Chainage 0-8.0	1	8	(9+9.75)/2	0.2		15.6	
	Chainage 8.0-23.0	1	15	(9.75+8.8)/2	0.2		26.4	
	Chainage 23.0-38.0	1	15	(8.8+9.1)/2	0.2		27.3	
	Chainage 38.0- 53.0	1	15	(9.1+9.1)/3	0.2		27.3	
	Chainage 53.0-68.0	1	15	(9.1+8.2)/2	0.2		24.6	
	Chainage 68.0 -82.5	1	14.5	(8.2+9.92)/2	0.2		28.77	
	Chainage 82.5-90.0	1	7.5	(9.92+10.12)/2	0.2		15.18	
	Chainage 90.0-105.0	1	15	(10.12+7.72)/2	0.2		29.76	
	Chainage 105.0-120.0	1	15	(7.72+9.87)/2	0.2		25.95	
	Chainage 120.0-128.0	1	8	(9.8+10.72)/2	0.2		17.15	
	Earth work for wmm Laying In	3	7.5	1.5	0.2		6.75	
	Badrappa Layout road							
	Chainage 0-15.0	1	15	(4.1+4.75)/2	0.2		13.28	
	Chainage 15.0-30.0	1	15	(4.75+4.65)/2	0.2		14.7	
	Chainage 30.0-45.0	1	15	(4.65+3.3)/2	0.2		10.2	
	Chainage 45.0- 60.0	1	15	(3.3+4.3)/2	0.2		14.4	
	Chainage 60.0-75.2	1	15.2	(4.3+5.0)/2	0.2		15.81	
	Total Qty						**310.20**	

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Contractor

Assistant Engineer
BBMP Ward no 12

Asst. Executive Engineer, BBMP
Ward no 12

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Continued EMB Pre Measurements Recorded On : 09/05/23

13	Providing and applying Primer Coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means MORTH Specification No. 502 (PWD SR 21-22 Vol III Pg no. 29 Item No. 5.1 A (i))							
	Indoor Stadium							
	Chainage 0-8.0(RHS and LHS)	1	8	(9+9.75)/2			75.0	
	Chainage 8.0-23.0 (RHS and LHS)	1	15	(9.75+8.8)/2			139.1	
	Chainage 23.0-38.0 (RHS and LHS)	1	15	(8.8+9.1)/2			134.3	
	Chainage 38.0- 53.0 (RHS and LHS)	1	15	(9.1+9.1)/3			136.5	
	Chainage 53.0-68.0 (RHS and LHS)	1	15	(9.1+8.2)/2			129.8	

614.60

Chainage 68.0 -82.5 (RHS and LHS)	1	14.5	(8.2+9.92)/2			131.4	
Chainage 82.5-90.0 (RHS and LHS)	1	7.5	(9.92+10.12)/2			75.2	
Chainage 90.0-105.0 (RHS and LHS)	1	15	(10.12+7.72)/2			133.8	
Chainage 105.0-120.0 (RHS and LHS)	1	15	(7.72+9.87)/2			131.9	
Chainage 120.0-128.0 (RHS and LHS)	1	8	(9.8+10.72)/2			82.4	
Earth work for wmm Laying In	7	8.5	2			119.0	
Badrappa Layout road							
Chainage 0-15.0	1	15	(4.1+4.75)/2			71.3	
Chainage 15.0-30.0	1	15	(4.75+4.65)/2			69.8	
Chainage 30.0-45.0	1	15	(4.65+3.3)/2			49.5	
Chainage 45.0- 60.0	1	15	(3.3+4.3)/2			64.5	1004.60
Chainage 60.0-75.2	1	15.2	(4.3+5.0)/2			76.0	
Total Qty						1619.23	

Assistant Executive Engine
Kodigehalli Sub Division
BBMP, Bangalore

Contractor

Assistant Engineer
BBMP Ward no 12

Assistant Executive Engineer
Kodigehalli Sub Division
Asst. Exe. Engineer BBMP
Ward no 12
BBMP, Bangalore

Continued EMB Pre Measurements Recorded On : 11/05/23

14 Providing and applying Tack Coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification No. 503 (PWD SR 21-22 Vol III Pg no. 29 Item No 5.4 (ii))

INDOOR STADIUM ROAD							
Chainage 0-8.0	1	8	(9+9.75)/2			75.0	
Chainage 8.0-23.0	1	15	(9.75+8.8)/2			139.1	
Chainage 23.0-38.0	1	15	(8.8+9.1)/2			134.3	
Chainage 38.0- 53.0	1	15	(9.1+9.1)/3			136.5	
Chainage 53.0-68.0	1	15	(9.1+8.2)/2			129.8	
Chainage 68.0 -82.5	1	14.5	(8.2+9.92)/2			131.4	
Chainage 82.5-90.0	1	7.5	(9.92+10.12)/2			75.2	
Chainage 90.0-105.0	1	15	(10.12+7.72)/2			133.8	
Chainage 105.0-120.0	1	15	(7.72+9.87)/2			131.9	
Chainage 120.0-128.0	1	8	(9.8+10.72)/2			82.4	
IN TEMPLE ROAD							
Chainage 0-15.0	1	15	(0+6.2)/2			46.5	
Chainage 15.0-30.0	1	15	(6.2+6.24)/2			93.3	
Chainage 30.0-45.0	1	15	(6.24+5.62)/2			89.0	
Chainage 45.0-60.0	1	15	(5.62+5.1)/2			80.4	
Chainage 60.0-75.0	1	15	(5.1+5.25)/2			77.6	

1556.00

Chainage 75.0-90.0	1	15	(5.25+5.6)/2			81.4	
Chainage 90.0-105.0	1	15	(5.6+5.6)/2			84.0	
Chainage 105.0-120.0	1	15	(5.6+6.3)/2			89.3	
Chainage 120.0-135.0	1	15	(6.3+6.2)/2			93.8	
Chainage 135.0-150.0	1	15	(6.2+7)/2			99.0	
Chainage 150.0-165.0	1	15	(7.0+9.5)/2			123.8	
Chainage 165.0-180.0	1	15	(9.5+8)/2			131.3	
Chainage 180.0-195.0	1	15	(8.0+7.4)/2			115.5	
Chainage 195.0-210.0	1	15	(7.4+7.2)/2			109.5	
Chainage 210.0-225.0	1	15	(7.2+7.2)/2			108.0	
Chainage 225.0-240.0	1	15	(7.2+8.6)/2			118.5	
Chainage 240.0-255.0	1	15	(8.6+7.4)/2			120.0	
Chainage 255.0-270.0	1	15	(7.4+6.9)/2			107.3	
Chainage 270.0-285.0	1	15	(6.9+8.65)/2			116.6	
Chainage 285.0-300.0	1	15	(8.65+8)/2			124.9	
Chainage 300.0-315.0	1	15	(8.0+6.8)/2			111.0	
Chainage 315.0-320.0	1	15	(6.8+8.05)/2			111.4	
Chainage 320.0-335.0	1	15	(8.05+8.16)/2			1[illegible]	
Chainage 335.0-350.0	1	15	(8.16+7)/2			113.6	
Chainage 350.0-365.0	1	15	(7.0+8.05)/2			112.9	
Chainage 365.0-380.0	1	15	(8.05+7.4)/2			115.9	
Chainage 380.0-395.0	1	15	(7.4+8.8)/2			121.5	
Chainage 395.0-403.8	1	8.8	(8.8+9.6)/2			81.0	
Badrappa Layout road							
Chainage 0-15.0	1	15	(4.1+4.75)/2			71.3	
Chainage 15.0-30.0	1	15	(4.75+4.65)/2			69.8	
Chainage 30.0-45.0	1	15	(4.65+3.3)/2			49.5	
Chainage 45.0- 60.0	1	15	(3.3+4.3)/2			64.5	
Chainage 60.0-75.2	1	15.2	(4.3+5.0)/2			76.0	
Covering Slab Drain (Badrappa Layout (Ram Provision Road)							
Chainage 0-15.0	1	15	(4.5+4.75)/2			69.4	
Chainage 15.0-30.0	1	15	(4.75+5.1)/2			73.5	
Chainage 30.0-45.0	1	15	(5.1+5.25)/2			51.0	
Chainage 45.0- 60.0	1	15	(5.25+4.9)/2			72.0	
Chainage 60.0-72.5	1	12.5	(4.9+5.15)/2			65.0	3173.40
Total Qty						**4729.37**	

Contractor

Assistant Engineer
BBMP Ward no 12

Asst. Exe.Engineer BBMP
Ward no 12

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Continued EMB Pre Measurements Recorded On : 09/05/23

15	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects (PWD SR 21-22 Vol III Pg no 33 Item No 5.12 (C))							
	INDOOR STADIUM ROAD							
	Chainage 0-8.0(RHS and LHS)	1	8	(9+9.75)/2	0.05		3.75	
	Chainage 8.0-23.0 (RHS and LHS)	1	15	(9.75+8.8)/2	0.05		6.96	
	Chainage 23.0-38.0 (RHS and LHS)	1	15	(8.8+9.1)/2	0.05		6.71	
	Chainage 38.0- 53.0 (RHS and LHS)	1	15	(9.1+9.1)/3	0.05		6.83	
	Chainage 53.0-68.0 (RHS and LHS)	1	15	(9.1+8.2)/2	0.05		6.49	
	Chainage 68.0 -82.5 (RHS and LHS)	1	14.5	(8.2+9.92)/2	0.05		6.57	
	Chainage 82.5-90.0 (RHS and LHS)	1	7.5	(9.92+10.12)/2	0.05		3.76	
	Chainage 90.0-105.0 (RHS and LHS)	1	15	(10.12+7.72)/2	0.05		6.69	
	Chainage 105.0-120.0 (RHS and LHS)	1	15	(7.72+9.87)/2	0.05		6.60	
	Chainage 120.0-128.0 (RHS and LHS)	1	8	(9.8+10.72)/2	0.05		4.12	
	Earth work for wmm Laying In	3	7.5	1.5	0.05		1.69	
	Badrappa Layout road							
	Chainage 0-15.0	1	15	(4.1+4.75)/2	0.05		3.56	
	Chainage 15.0-30.0	1	15	(4.75+4.65)/2	0.05		3.49	
	Chainage 30.0-45.0	1	15	(4.65+3.3)/2	0.05		2.48	
	Chainage 45.0- 60.0	1	15	(3.3+4.3)/2	0.05		3.23	
	Chainage 60.0-75.2	1	15.2	(4.3+5.0)/2	0.05		3.80	
	Total						**76.70**	

Assistant Executive Engine
Kodigehalli Sub Division
BBMP, Bangalore

Contractor

Assistant Engineer
BBMP Ward no 12

Asst. Exe.Engineer BBMP
Ward no 12

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

BRUHAT BANGALORE MAHANAGARA PALIKE
NAME OF WORK :- Improvements to Roads And Drains in various Cross Roads of Devinagara,Lottegolahalli and surrounding area in ward no.12-Kodigehalli
EMB :1st And Final Bill
Job No :012-23-000007
POST MEASUREMENTS

BRUHAT BENGALURU MAHANAGARA PALIKE

EMB NO :001

Running Account Bill No.1st And Final Bill | Recorded On: / /2023

Name of work:Improvements to Roads And Drains in various Cross Roads of Devinagara,Lottegolahalli and surrounding area in ward no.12-Kodigehalli

Job No :012-23-000007 Measurement Recorded on 26/10/23

Administrative Sanction No :AS/EE(BTP)/55/2022-23

Technical Sanction No :TS/CE/(YNK)/116/2022-23

Work Order No : BBMP/EE/BTP/ WO/188/2022-23

Name Of Agency :Sri Abbu Sambasiva Reddy

Aggrement No :

Sl no.	Description of work	Dimensions				Unit	Total Quantity	Approved Rate	Amount
		No	L	B	D				
1	Removing and resetting of footpath slab (Approved arrival rate)								
	Covering Slab Drain Lhs(Badrappa Layout)								
	Chainage 0-15.0	1	15	0.9		Sqm	13.5		
	Chainage 15.0-30.0	1	15	0.9		Sqm	13.5		
	Chainage 30.0-31.2	1	1.2	0.9		Sqm	1.08		
	Chainage 31.2- 33.6	1	2.4	0.9		Sqm	2.16		
	Chainage 33.6-36.6	1	3	1.5		Sqm	4.5		
	Chainage 36.6-51.6	1	15	0.9		Sqm	13.5		
	Chainage 51.6-66.6	1	15	0.9		Sqm	13.5		
	Chainage 66.6-75.2	1	8.6	0.9		Sqm	7.74		
	Covering Slab Drain Rhs(Badrappa Layout)								
	Chainage 0-15.0	1	15	0.9		Sqm	13.5		
	Chainage 15.0-30.0	1	15	0.9		Sqm	13.5		
	Chainage 30.0-45.0	1	15	0.9		Sqm	13.5		
	Chainage 45.0- 60.0	1	15	0.9		Sqm	13.5		
	Chainage 60.0-75.5	1	15	0.9		Sqm	13.5		
	Covering Slab Drain Lhs(Badrappa Layout (Ram Provision Road)								
	Chainage 0-15.0	1	15	0.9		Sqm	13.5		
	Chainage 15.0-30.0	1	15	0.9		Sqm	13.5		
	Chainage 30.0-45.0	1	15	0.9		Sqm	13.5		
	Chainage 45.0- 60.0	1	15	0.9		Sqm	13.5		
	Covering Slab Drain Rhs(Badrappa Layout (Ram Provision Road)								
	Chainage 0-15.0	1	15	0.9		Sqm	13.5		
	Chainage 15.0-30.0	1	15	0.9		Sqm	13.5		
	Chainage 30.0-45.0	1	15	0.9		Sqm	13.5		
	Chainage 45.0- 60.0	1	15	0.9		Sqm	13.5		
	Chainage 60.0-72.5	1	12.5	0.9		Sqm	11.25		
	Opposite Sahakarnagar Indoor Stadium Road								
	Chainage 0-15.0	1	15	0.9		Sqm	13.5		

CE/SE 26/10/23

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

269.73

	Chainage 15.0-30.0	1	15	0.9		Sqm	13.5		
	Chainage 30.0-45.0	1	15	0.9		Sqm	13.5		
	Chainage 45.0- 60.0	1	15	0.9		Sqm	13.5		
	Chainage 60.0-75.0	1	15	0.9		Sqm	13.5		
	Chainage 75.0-90.0	1	15	0.9		Sqm	13.5		
	Chainage 90.0-105.0	1	15	0.9		Sqm	13.5		
	Chainage 105.0-120.0	1	15	0.9		Sqm	13.5		
	Chainage 120.0-135.0	1	15	0.9		Sqm	13.5		
	Chainage 135.0-147.0	1	12	0.9		Sqm	10.8		
	Total Qty						**388.53**	**185.0**	71878.05
2	Earth work Excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)								
	Pre Measurements Recorded on page No 01 to 02 of EMB					Cum	278.15		
	Total Quantity					**Cum**	**278.15**	**204.0**	56742.6
3	Providing B S Slabs of selected quality roughly dressed having a size of 10cms thick and fixed in cement mortar(1:6) including fixing curing etc...complete as directed by the engineer in charge of the work (Excluding GST and Area Leading Charges)								
	QTY Was Not Operated					Sqm	375.84		
	Total Quantity					**Sqm**	**378.84**	**500.0**	0.0
4	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.Mix (M20) Using 20 mm nominal size graded crushed coarse aggregates(PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2))								
	Pre Measurements Recorded on page No 02 to 03 of EMB					Cum	33.22		
	Total Quantity					**Cum**	**33.22**		137036.00
	~~**Qty up to 100% of BOQ**~~					**Cum**	~~**15.18**~~	**7220.0**	109599.6
	Qty B/N 100 to 125% of BOQ				18.98	**Cum**	~~**3.8**~~	**7220.0**	27436.0
	Qty above 125% of BOQ					**Cum**	**14.24**	**5868.63**	83569.29
5	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)								
	Pre Measurements Recorded on page No 03 to 04 of EMB						2.65		
	Total Quantity						**2.65**		119700
	~~**Qty up to 100% of BOQ**~~						~~**0.91**~~	**105000.0**	95550.0
	Qty B/N 100 to 125% of BOQ				1.14		~~**0.23**~~	**105000.0**	24150.0
	Qty above 125% of BOQ						**1.51**	**78592.3**	118674.43
6	Providing and Fixing pre cast Covering Slab made out of CC 1:2:4 with 10cm thick and Finishing cutting, including form work,curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, copmplete. (Data Rate)								

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

	For New Drain infront of Indoor Stadium								
	Chainage 0-16.45	1	16.5	0.9		Sqm	14.81		
	Chainage 16.45-21.97 Culvert								
	Chainage 21.97-36.97	1	15	0.9		Sqm	13.5		
	Chainage 36.97-55.97	1	15	0.9		Sqm	13.5		
	Chaiange 55.97-55.47	1	3.5	0.9		Sqm	3.15		
	For New Drain Indoor Stadium Main Road side								
	Chainage 0-15.0	1	15	0.9		Sqm	13.5		
	Chainage 15.0-30.0	1	15	0.9		Sqm	13.5		
	Chainage 30.0-45.0	1	10	0.9		Sqm	9		
	Total Qty					**Sqm**	**80.96**		118800
	~~Qty up to 100% of BOQ~~					**Sqm**	**52.8**	**1800.0**	**95040.00**
	~~Qty B/N 100 to 125% of BOQ~~				66	**Sqm**	**13.2**	**1800.0**	**23760.00**
	Qty above 125% of BOQ					**Sqm**	**14.96**	**2072.0**	**30997.12**
7	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness,well compacted using plate vibrators, including all lead & lifts, cost ofall materials of quality, labour, Usage charges of machineries, curing,and all the other appurtenances required to complete the work as pertechnical specifications. (The cost of steel reinforcement & formwork shall be paid separately)(PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)								
	Pre Measurements Recorded on page No 04 to 05 of EMB					Cum	27.5		
	Total Quantity					**Cum**	**27.5**	**5000**	**137500**
8	Providing and Fixing pre cast Precast solid cement kerb stones made out of M20 with top and bottom width 114 and 165mm respectievly,400mm High and 450mm in length finalised with CM 1:3 plastering and finishing cutting including form work								
	For New Drain infront of Indoor Stadium								
	Chainage 0-16.45		1	16.45		Sqm	16.45		
	Chainage 16.45-21.97 Culvert		1	5.52		Sqm	-5.52		
	Chainage 21.97-36.97		1	15		Sqm	15		
	Chainage 36.97-55.97		1	15		Sqm	15		
	Chaiange 55.97-55.47		1	3.5		Sqm	3.5		
	Badrappa Layout road								
	LHS								
	Chainage 0-15.0		1	12		Sqm	12		
	Chainage 15.0-30.0		1	10		Sqm	10		
	Chainage 30.0-31.2		1	1.35		Sqm	1.35		
	Chainage 31.2- 33.6		1	2.25		Sqm	2.25		
	Chainage 33.6-36.6		1	3.63		Sqm	3.63		
	Chainage 36.6-51.6		1	1.8		Sqm	1.8		
	Chainage 51.6-66.6		1	11.5		Sqm	11.5		
	Chainage 66.6-75.2		1	6.75		Sqm	6.75		
	RHS								
	Chainage 0-15.0		1	15		Sqm	15		

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

118800

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

108.71

	Chainage 15.0-30.0		1	7.2		Sqm	7.2			
	Chainage 30.0-45.0		1	7.2		Sqm	7.2			
	Chainage 45.0- 60.0		1	10.8		Sqm	10.8			
	Chainage 60.0-75.5		1	9		Sqm	9			
	For New Drain Indoor Stadium Main Road side									
	Chainage 0-15.0		1	12		Sqm	12			
	Chainage 15.0-30.0		1	14		Sqm	14			
	Chainage 30.0-45.0		1	11.5		Sqm	11.5			
	Chainage 45.0- 54.0		1	9		Sqm	9			
							189.41			
	Total Qty	189.41/0.45 = 420.91				**Sqm**	**420.91**		**400.0**	**168364.0**
9	Removing and Resetting of Kerbs stones									
	QTY Was Not Operated					Sqm	430.4			
	Total Quantity					**Sqm**	**430.4**		**118.0**	**0.0**
10	Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surfaces									
	For New Drain infront of Indoor Stadium									
	Chainage 0-16.45	1	16.5		0.35	Sqm	5.76			
	Chainage 16.45-21.97 Culvert	-1	5.52		0.35	Sqm	-1.93			
	Chainage 21.97-36.97	1	15.0		0.35	Sqm	5.25			
	Chainage 36.97-55.97	1	15.0		0.35	Sqm	5.25			
	Chaiange 55.97-55.47	1	3.5		0.35	Sqm	1.23			
	Badrappa Layout road									
	Chainage 0-15.0	2	15.0		0.35	Sqm	10.50			
	Chainage 15.0-30.0	2	15.0		0.35	Sqm	10.50			
	Chainage 30.0-45.0	2	15.0		0.35	Sqm	10.50			
	Chainage 45.0- 60.0	2	15.0		0.35	Sqm	10.50			
	Chainage 60.0-75.5	2	14.0		0.35	Sqm	9.80			
	LHS									
	Chainage 0-15.0	1	13.5		0.35	Sqm	4.73			
	Chainage 15.0-30.0	1	11.3		0.35	Sqm	3.94			
	Chainage 30.0-31.2	1	1.35		0.35	Sqm	0.47			
	Chainage 31.2- 33.6	1	2.25		0.35	Sqm	0.79			
	Chainage 33.6-36.6	1	3.63		0.35	Sqm	1.27			
	Chainage 36.6-51.6	1	1.8		0.35	Sqm	0.63			
	Chainage 51.6-66.6	1	12.6		0.35	Sqm	4.41			
	Chainage 66.6-75.2	1	6.75		0.35	Sqm	2.36			
	RHS									
	Chainage 0-15.0	1	15.0		0.35	Sqm	5.25			
	Chainage 15.0-30.0	1	7.2		0.35	Sqm	2.52			
	Chainage 30.0-45.0	1	7.2		0.35	Sqm	2.52			
	Chainage 45.0- 60.0	1	10.8		0.35	Sqm	3.78			
	Chainage 60.0-75.5	1	9.0		0.35	Sqm	3.15			
	Total Qty					**Sqm**	**103.17**		**90.0**	**9285.3**

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Assistant Executive Engineer
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BBMP, Bangalore

11	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work.(PWD SR 21-22 Vol I Pg no. 8 Item No. 1.12)					
	Pre Measurements Recorded on page No 05 to 06 of EMB		Cum	399.38		
	Total Quantity		**Cum**	**399.38**		27956.60
	~~Qty up to 100% of BOQ~~	~~399.38~~	**Cum**	**~~346.75~~**	**~~70~~**	**~~24272.5~~**
	~~Qty B/N 100 to 125% of BOQ~~	399.38	**Cum**	**~~52.63~~**	**70**	**~~3684.1~~**
12	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density MORTH Specification No. 406 (PWD SR 21-22 Vol III Pg no. 24 Item No. 4.27 (A))					
	Pre Measurements Recorded on page No 07 of EMB		Cum	310.2		
	Total Quantity		**Cum**	**310.2**		442102.00
	~~Qty up to 100% of BOQ~~		**~~Cum~~**	**~~208.05~~**	**1700**	**353685.0**
	~~Qty B/N 100 to 125% of BOQ~~	260.06	**~~Cum~~**	**~~52.01~~**	**~~1700~~**	**88417.0**
	Qty above 125% of BOQ		**Cum**	**50.14**	**2245.76**	**112602.41**
13	Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.20 kg/m2 on the prepared bituminous surface cleaned with mechanicalbroom (PWD SR 21-22 Vol III Pg no. 29 Item No. 5.3 A (i))					
	Pre Measurements Recorded on page No 07 to 08 of EMB		Cum	1619.23		
	Total Quantity		**Cum**	**1619.23**		77723.04
	~~Qty up to 100% of BOQ~~		**Cum**	**~~1387.0~~**	**~~48.0~~**	**66576**
	Qty B/N 100 to 125% of BOQ	1619.23	**Cum**	**~~232.23~~**	**48.0**	**11147.04**
14	Providing and applying Tack Coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification No. 503 (PWD SR 21-22 Vol III Pg no. 29 Item No 5.3(i))					
	Pre Measurements Recorded on page No 08 to 09 of EMB		Cum	4729.37		
	Total Quantity		**Cum**	**4729.37**		22539.00
	~~Qty up to 100% of~~ BOQ		**Cum**	**1387**	**13.0**	**18031.0**
	Qty B/N 100 to 125% of BOQ	1733.75	**Cum**	**~~346.75~~**	**~~13.0~~**	**4507.75**
	Qty above 125% of BOQ		**Cum**	**2995.62**	**11.26**	**33730.68**
15	crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects (PWD SR 21-22 Vol III ~~Pg no~~ 33 Item No 5.12 (C))					
	Pre Measurements Recorded on page No 10 of EMB		Cum	76.7		
	Total Quantity		**Cum**	**76.7**		65150.00
	~~Qty up to 100% of BOQ~~		**Cum**	**~~69.35~~**	**~~8500.0~~**	**589475**
	Qty B/N 100 to 125% of BOQ	76.70	**Cum**	**~~7.35~~**	**8500.0**	**62475**

16	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade,level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (PWD SR 21-22 Vol III Pg no 36 Item No 5.16 (C))							
	INDOOR STADIUM ROAD							
	Chainage 0-8.0	1	8	(9+9.75)/2	0.04	Cum	3.0	
	Chainage 8.0-23.0	1	15	(9.75+8.8)/2	0.04	Cum	5.6	
	Chainage 23.0-38.0	1	15	(8.8+9.1)/2	0.04	Cum	5.4	
	Chainage 38.0- 53.0	1	15	(9.1+9.1)/3	0.04	Cum	5.5	
	Chainage 53.0-68.0	1	15	(9.1+8.2)/2	0.04	Cum	5.2	
	Chainage 68.0 -82.5	1	14.5	(8.2+9.92)/2	0.04	Cum	5.3	
	Chainage 82.5-90.0	1	7.5	(9.92+10.12)/2	0.04	Cum	3.0	
	Chainage 90.0-105.0	1	15	(10.12+7.72)/2	0.04	Cum	5.4	
	Chainage 105.0-120.0	1	15	(7.72+9.87)/2	0.04	Cum	5.3	
	Chainage 120.0-128.0	1	8	(9.8+10.72)/2	0.04	Cum	3.3	
	IN TEMPLE ROAD							
	Chainage 0-15.0	1	15	(0+6.2)/2	0.04	Cum	1.9	
	Chainage 15.0-30.0	1	15	(6.2+6.24)/2	0.04	Cum	3.7	
	Chainage 30.0-45.0	1	15	(6.24+5.62)/2	0.04	Cum	3.6	
	Chainage 45.0-60.0	1	15	(5.62+5.1)/2	0.04	Cum	3.2	
	Chainage 60.0-75.0	1	15	(5.1+5.25)/2	0.04	Cum	3.1	
	Chainage 75.0-90.0	1	15	(5.25+5.6)/2	0.04	Cum	3.3	
	Chainage 90.0-105.0	1	15	(5.6+5.6)/2	0.04	Cum	3.4	
	Chainage 105.0-120.0	1	15	(5.6+6.3)/2	0.04	Cum	3.6	
	Chainage 120.0-135.0	1	15	(6.3+6.2)/2	0.04	Cum	3.8	
	Chainage 135.0-150.0	1	15	(6.2+7)/2	0.04	Cum	4.0	
	Chainage 150.0-165.0	1	15	(7.0+9.5)/2	0.04	Cum	5.0	
	Chainage 165.0-180.0	1	15	(9.5+8)/2	0.04	Cum	5.3	
	Chainage 180.0-195.0	1	15	(8.0+7.4)/2	0.04	Cum	4.6	
	Chainage 195.0-210.0	1	15	(7.4+7.2)/2	0.04	Cum	4.4	
	Chainage 210.0-225.0	1	15	(7.2+7.2)/2	0.04	Cum	4.3	
	Chainage 225.0-240.0	1	15	(7.2+8.6)/2	0.04	Cum	4.7	
	Chainage 240.0-255.0	1	15	(8.6+7.4)/2	0.04	Cum	4.8	
	Chainage 255.0-270.0	1	15	(7.4+6.9)/2	0.04	Cum	4.3	
	Chainage 270.0-285.0	1	15	(6.9+8.65)/2	0.04	Cum	4.7	
	Chainage 285.0-300.0	1	15	(8.65+8)/2	0.04	Cum	5.0	
	Chainage 300.0-315.0	1	15	(8.0+6.8)/2	0.04	Cum	4.4	
	Chainage 315.0-320.0	1	15	(6.8+8.05)/2	0.04	Cum	4.5	
	Chainage 320.0-335.0	1	15	(8.05+8.16)/2	0.04	Cum	4.9	
	Chainage 335.0-350.0	1	15	(8.16+7)/2	0.04	Cum	4.5	
	Chainage 350.0-365.0	1	15	(7.0+8.05)/2	0.04	Cum	4.5	
	Chainage 365.0-380.0	1	15	(8.05+7.4)/2	0.04	Cum	4.6	
	Chainage 380.0-395.0	1	15	(7.4+8.8)/2	0.04	Cum	4.9	
	Chainage 395.0-403.8	1	8.8	(8.8+9.6)/2	0.04	Cum	3.2	
	Cross Roads	1	15	(7.2+7.2)/2	0.04	Cum	4.3	
		1	15	(7.2+8.6)/2	0.04	Cum	4.7	
		1	15	(8.6+7.4)/2	0.04	Cum	4.8	

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Kodigehalli Sub Division
BBMP, Bangalore

E.E. (B.T.) DIV

176.60

	Cross Roads	1	15	(6.9+8.65)/2	0.04	Cum	4.7			
		1	15	(8.65+8)/2	0.04	Cum	5.0			
		1	15	(8.0+6.8)/2	0.04	Cum	4.4			
	Badrappa Layout road									
	Chainage 0-15.0	1	15	(4.1+4.75)/2	0.04	Cum	2.9			
	Chainage 15.0-30.0	1	15	(4.75+4.65)/2	0.04	Cum	2.8			
	Chainage 30.0-45.0	1	15	(4.65+3.3)/2	0.04	Cum	2.0			
	Chainage 45.0- 60.0	1	15	(3.3+4.3)/2	0.04	Cum	2.6			
	Chainage 60.0-75.2	1	15.2	(4.3+5.0)/2	0.04	Cum	3.0			
	Covering Slab Drain (Badrappa Layout (Ram Provision Road)									
	Chainage 0-15.0	1	15	(4.5+4.75)/2	0.04	Cum	2.8			
	Chainage 15.0-30.0	1	15	(4.75+5.1)/2	0.04	Cum	2.9			
	Chainage 30.0-45.0	1	15	(5.1+5.25)/2	0.04	Cum	2.0			
	Chainage 45.0- 60.0	1	15	(5.25+4.9)/2	0.04	Cum	2.9			
	Chainage 60.0-72.5	1	12.5	(4.9+5.15)/2	0.04	Cum	2.6	40.60		
	Total Qty						**217.13**		2605560.00	
	Qty up to 100% of BOQ					**Cum**	**204.04**	**12000.0**	**2448480.0**	
	Qty ~~B/N~~ 100 to 125% of BOQ				217.13	**Cum**	**13.09**	**12000.0**	**157080.0**	
17	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification No. 803 (PWD SR 21-22 Vol III Pg no 57 Item No 8.15)									
	Indoor Stadium Road									
	Chainage 0-8.0	2	8	0.1		Sqm	1.6			
	Chainage 8.0-23.0	2	15	0.1		Sqm	3.0			
	Chainage 23.0-38.0	2	15	0.1		Sqm	3.0			
	Chainage 38.0- 53.0	2	15	0.1		Sqm	3.0			
	Chainage 53.0-68.0	2	15	0.1		Sqm	3.0			
	Chainage 68.0 -82.5	2	14.5	0.1		Sqm	2.9			
	Chainage 82.5-90.0	2	7.5	0.1		Sqm	1.5			
	Chainage 90.0-105.0	2	15	0.1		Sqm	3.0			
	Chainage 105.0-120.0	2	15	0.1		Sqm	3.0			
	Chainage 120.0-128.0	2	8	0.1		Sqm	1.6			
	IN TEMPLE ROAD					Sqm				
	Chainage 0-15.0	2	15	0.1		Sqm	3.0			
	Chainage 15.0-30.0	2	15	0.1		Sqm	3.0			
	Chainage 30.0-45.0	2	15	0.1		Sqm	3.0			
	Chainage 45.0-60.0	2	15	0.1		Sqm	3.0			
	Chainage 60.0-75.0	2	15	0.1		Sqm	3.0			
	Chainage 75.0-90.0	2	15	0.1		Sqm	3.0			
	Chainage 90.0-105.0	2	15	0.1		Sqm	3.0			
	Chainage 105.0-120.0	2	15	0.1		Sqm	3.0			
	Chainage 120.0-135.0	2	15	0.1		Sqm	3.0			
	Chainage 135.0-150.0	2	15	0.1		Sqm	3.0			
	Chainage 150.0-165.0	2	15	0.1		Sqm	3.0			
	Chainage 165.0-180.0	2	15	0.1		Sqm	3.0			
	Chainage 180.0-195.0	2	15	0.1		Sqm	3.0			

Assistant Executive Engineer
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64.60

Assistant Executive Engineer
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	Chainage 195.0-210.0	2	15	0.1		Sqm	3.0		
	Chainage 210.0-225.0	2	15	0.1		Sqm	3.0		
	Chainage 225.0-240.0	2	15	0.1		Sqm	3.0		
	Chainage 240.0-255.0	2	15	0.1		Sqm	3.0		
	Chainage 255.0-270.0	2	15	0.1		Sqm	3.0		
	Chainage 270.0-285.0	2	15	0.1		Sqm	3.0		
	Chainage 285.0-300.0	2	15	0.1		Sqm	3.0		
	Chainage 300.0-315.0	2	15	0.1		Sqm	3.0		
	Chainage 315.0-320.0	2	15	0.1		Sqm	3.0		
	Chainage 320.0-335.0	2	15	0.1		Sqm	3.0		
	Chainage 335.0-350.0	2	15	0.1		Sqm	3.0		
	Chainage 350.0-365.0	2	15	0.1		Sqm	3.0		
	Chainage 365.0-380.0	2	15	0.1		Sqm	3.0		
	Chainage 380.0-395.0	2	15	0.1		Sqm	3.0		
	Chainage 395.0-403.8	2	8.8	0.1		Sqm	1.8		
	Badrappa Layout road					Sqm			
	Chainage 0-15.0	1	15	0.1		Sqm	1.5		
	Chainage 15.0-30.0	1	15	0.1		Sqm	1.5		
	Chainage 30.0-45.0	1	15	0.1		Sqm	1.5		
	Chainage 45.0- 60.0	1	15	0.1		Sqm	1.5		
	Chainage 60.0-75.2	1	15.2	0.1		Sqm	1.5	51.30	
	Total Qty						**115.88**		51387.00
	~~**Qty up to 100% of BOQ**~~					**Cum**	~~**78.3**~~	~~**525.0**~~	**41107.5**
	Qty B/N 100 to 125% of BOQ				97.88	**Cum**	~~**19.58**~~	**525.0**	**10279.5**
	Qty above 125% of BOQ					**Cum**	**18.0**	**448.4**	**8071.2**
18	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness,well compacted using plate vibrators, including all lead & lifts, cost ofall materials of quality, labour, Usage charges of machineries, curing,and all the other appurtenances required to complete the work as pertechnical specifications. (The cost of steel reinforcement & formwork shall be paid separately)								
	QTY Was Not Operated					Cum	3.88		
	Total Quantity					**Cum**	**3.88**	**6200.0**	**0.0**
19	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.Mix 1:3:6 (M10) Using 40 mm nominal size graded crushed coarse aggregates)								
	QTY Was Not Operated					Cum	7.64		
	Total Quantity					**Cum**	**7.64**	**7200.0**	**0.0**
20	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200								
	QTY Was Not Operated					Kg	0.69		
	Total Quantity					**Kg**	**0.69**	**105000.0**	**0.0**

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

21	Providing and Fixing pre cast Covering Slab 230mm thick made out of CC 1:2:4 and jelly 25mm Down size with steel reinforcement including form work,curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete. As per Engineer incharge								
	For Culvert								
	Chainage 16.45-21.97 Culvert	1	5.52	0.9		Sqm	4.96		
	Badrappa Layout	1	5.35	0.9		Sqm	4.81		
	Badrappa Layout	1	5.5	0.9		Sqm	4.95		
	Badrappa Layout	1	4.2	0.9		Sqm	3.78		
	Badrappa Layout	1	4.0	0.9		Sqm	3.6		
	Total Qty					**Sqm**	**22.1**	4000.00	88400.00
22	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification No. 803								
	QTY Was Not Operated					Sqm	156.6		
	Total Quantity					**Sqm**	**156.6**	525.0	0.0
23	Cost of Haulage Excluding Loading and Unloading Taking output 18 t load and lead 10 km = 180 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4B)								
	Qty frm Item No-2&11						613.94		
	Density of Sand/Debris i.e 1.28 Tonne/Cum		614	1.28			785.84		
	Total Qty					**T.Km**	**785.84**	159.0	124948.56
	TOTAL AMOUNT								5299516.632

5299517.00

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Assistant Engineer
Byatarayanapura Division
B.B.M.P Ward no 12

Assistant Executive Engineer
Byatarayanapura Division
B.B.M.P Ward no 12

Assistant Executive Engineer
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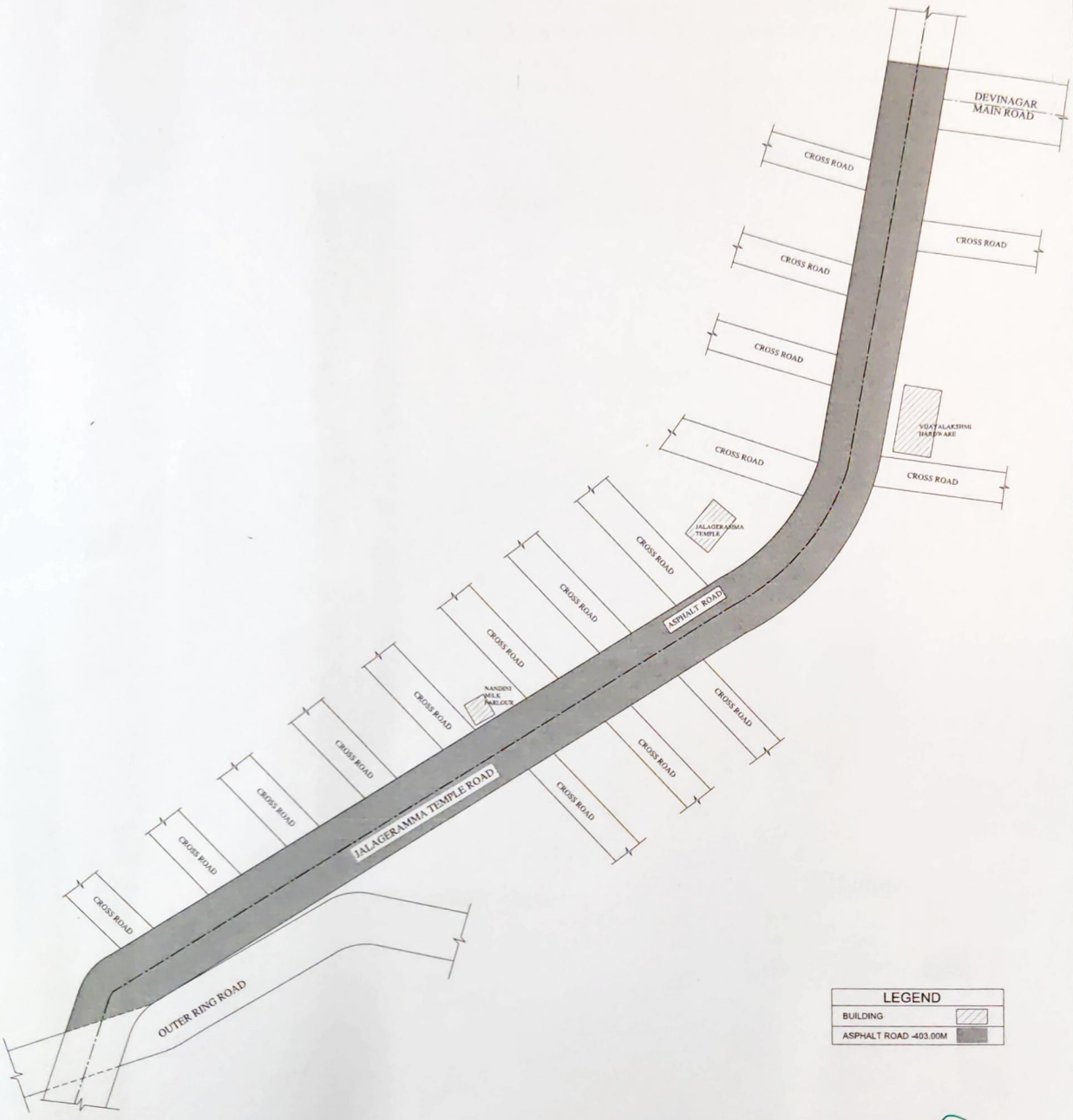
NAME OF WORK: IMPROVEMENTS TO ROADS AND DRAINS IN VARIOUS CROSS ROADS OF DEVINAGARA, LOTTEGOLAHALLI AND SURROUNDING AREA IN WARD NO. 12-KODIGEHALLI



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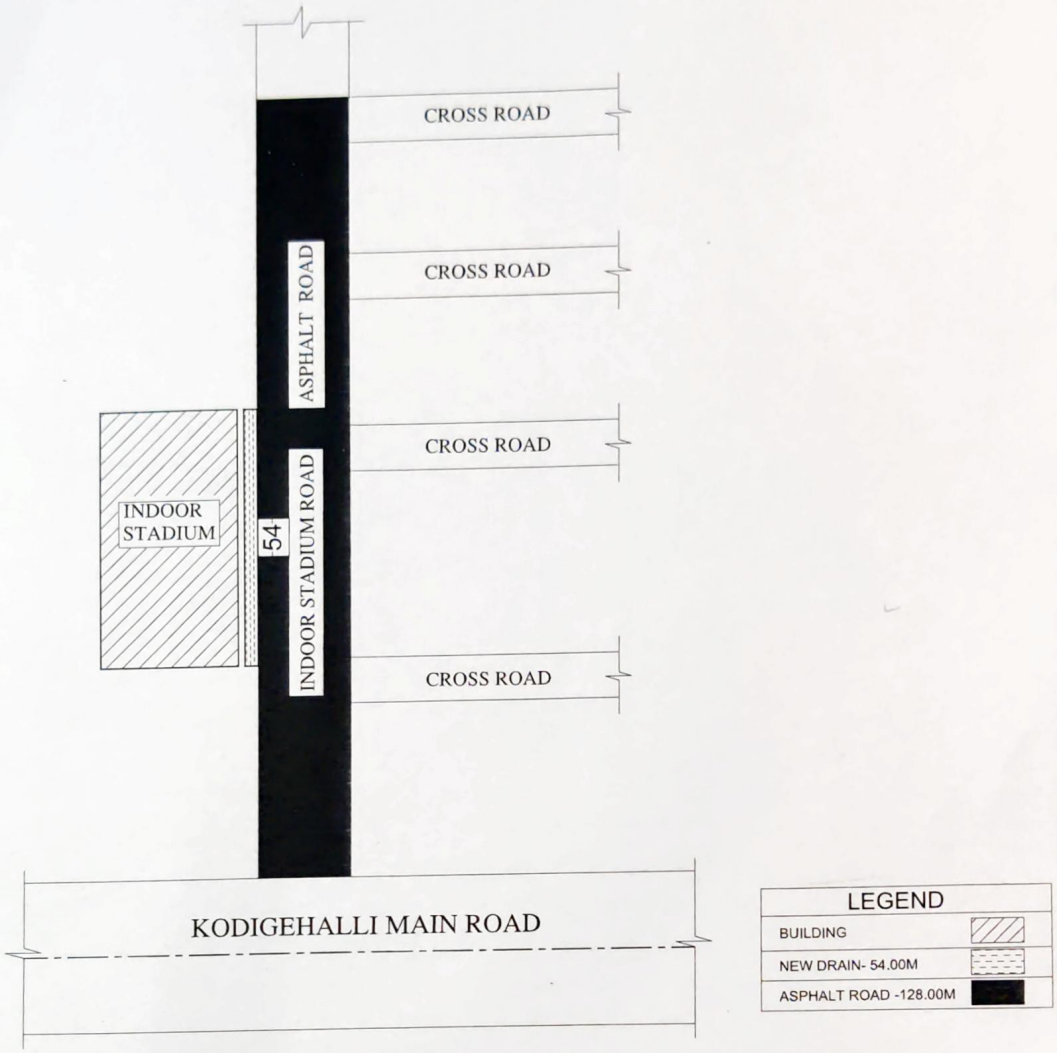

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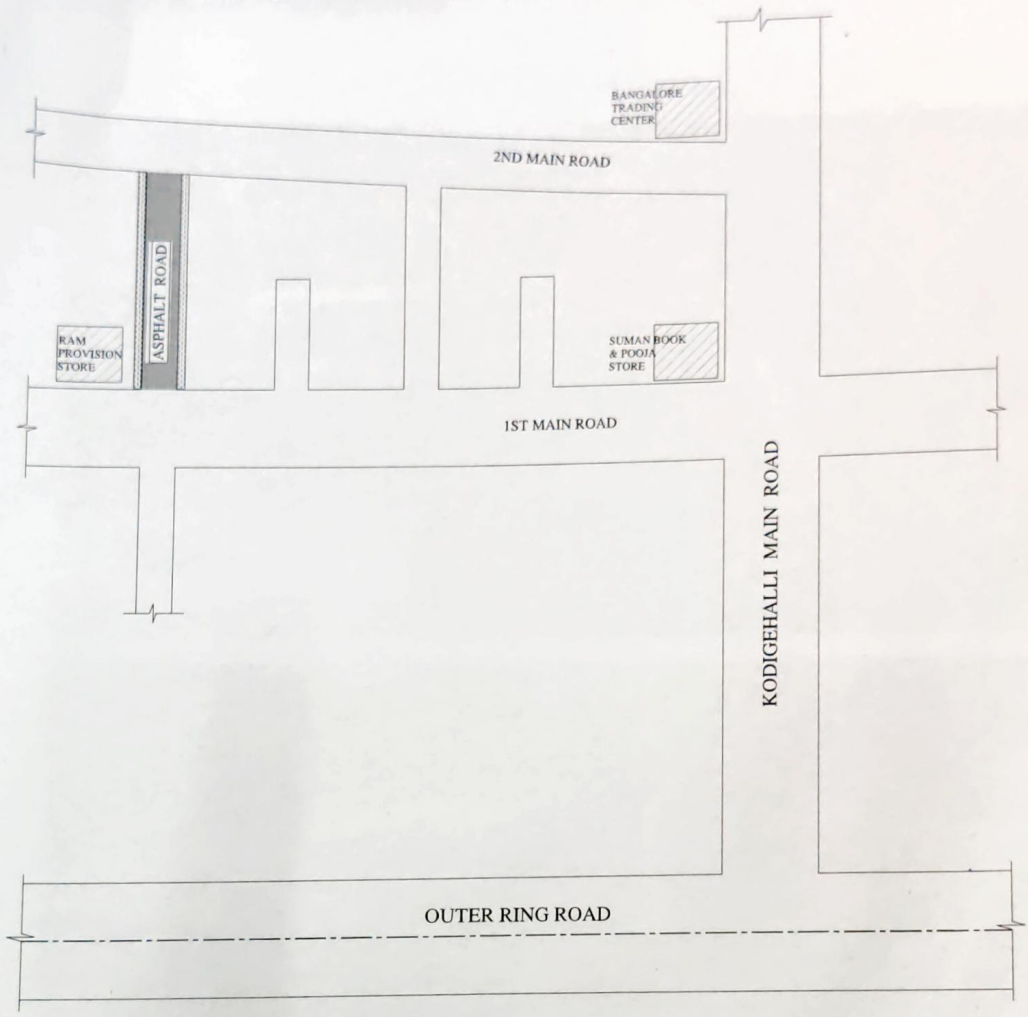

LEGEND	
BUILDING	
DESILT- 75.00M	
ASPHALT ROAD -75.00M	

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